Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission, the transmission comprising gear elements defining plural torque flow paths between a torque input shaft and a torque output shaft, and pressure-actuated friction elements selectively establishing a power-off downshift in gear ratio as an oncoming friction element and an offgoing friction element are applied and released, the downshift having adaptive shift characteristics including pressure boost time as pressure at the oncoming friction element is boosted and starting pressure for the oncoming friction element at the beginning of a ratio change is increased, the control method comprising the steps of:

monitoring measured operating conditions during a current power-off downshift; and

adjusting the adaptive shift characteristics for a subsequent downshift as determined by the measured operating conditions, whereby power-off downshift quality is improved;

the step of adjusting the adaptive shift characteristics being executed in a predetermined order of priority to achieve shift smoothness in a reduced power-off downshift time.

2. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a start of a ratio change during a pressure boost for a current downshift; and

reducing the pressure boost time by a value determined by calibration whereby a torque disturbance at the torque output shaft is avoided during a subsequent downshift.

3. (Previously amended) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting an aggressive ramping of starting pressure on the oncoming clutch during a current shift; and

increasing oncoming friction element starting pressure whereby an aggressive ramping is eliminated during a subsequent shift.

4. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a large torque transfer time error during a current shift; and

changing pressure boost time to reduce the error during a subsequent shift.

5. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a large torque transfer error and a tie up due to pressure boost during a current shift; and

reducing boost time by the larger of an error in torque transfer time and an error in tie up due to pressure boost during a subsequent shift.

6. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error during a current shift; and

changing pressure boost time to reduce the error during a subsequent shift.

7. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error and detecting a negative controller effort during a current shift; and

changing pressure boost time to reduce the error during a subsequent shift.

8. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer error and a positive controller effort during a current shift; and

changing pressure boost time to reduce the error during a subsequent shift.

9. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission the steps of:

detecting a small torque transfer error and a tie up due to pressure boost during a current shift; and

reducing pressure boost time by the larger of torque transfer time error and tie up during a subsequent shift.

10. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission the steps of:

detecting a small torque transfer time error, a tie up due to boost time and a negative controller effort during a current shift; and

reducing pressure boost time by the larger of torque transfer error and error due to tie up and decreasing oncoming friction element starting pressure to reduce controller effort during a subsequent shift.

11. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error and a positive controller effort during a current shift; and

reducing pressure boost time by the larger of torque transfer error and a tie up error and increasing oncoming friction element starting pressure to reduce controller effort during a subsequent shift.

12. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a tie up due to boost time and a slip time error during a current shift; and

reducing pressure boost time by the larger of torque transfer error and tie up error and changing oncoming friction element starting pressure to reduce slip time error during a subsequent shift.

13. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer error, a tie up due to pressure boost time, a slip time error and negative controller effort during a current shift; and

reducing pressure boost time by the larger of torque transfer error and tie up error and decreasing oncoming friction element starting pressure by the larger of controller effort adjustment and slip time adjustment during a subsequent shift.

14. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a tie up due to pressure boost time, a slip time error and a positive controller effort during a current shift; and

reducing pressure boost time by the larger of torque transfer error and tie up error and increasing oncoming friction element starting pressure by the larger of controller effort and slip time adjustment during a subsequent shift.

15. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a tie up due to boost and an initial slip time error during a current shift;

reducing pressure boost time by the larger of the torque transfer error and tie up error and changing oncoming friction element starting pressure to reduce initial slip time error during a subsequent shift.

16. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a tie up due to boost, an initial slip time error and a negative controller effort during a current shift; and

reducing boost time by the larger of torque transfer error and tie up error and decreasing oncoming friction element starting pressure during a subsequent shift.

17. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a tie up due to boost, an initial slip time error and a positive controller effort during a current shift; and

reducing boost time by the larger of torque transfer error and tie up error and increasing oncoming friction element starting pressure during a subsequent shift.

18. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a tie up due to boost, slip time error, and initial slip time error during a current shift; and

reducing boost time by the larger of torque transfer time error and tie up error and changing oncoming friction element starting pressure during a subsequent shift.

19. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a tie up due to boost, a slip time error, and initial slip time error and a negative controller effort during a current shift; and

reducing boost time by the larger of torque transfer error and tie up error and decreasing starting pressure of the oncoming friction element by the larger of controller effort and slip time adjustment during a subsequent shift.

20. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a tie up due to boost, a slip time error, an initial slip time error and a positive controller effort during a current shift; and

reducing boost time by the larger of torque transfer time error and tie up error and increasing starting pressure of the oncoming friction element by the larger of controller effort and slip time adjustment during a subsequent shift.

21. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error and a slip time error during a current shift; and

reducing boost time and changing oncoming clutch starting pressure based on slip time during a subsequent shift.

22. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a slip time error and a negative controller effort during a current shift; and

reducing boost time and decreasing oncoming friction element starting pressure by the larger of controller effort and slip time adjustment during a subsequent shift.

23. (Previously presented) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission as set forth in claim 1 wherein adjusting the adaptive shift characteristic comprises the steps of:

detecting a small torque transfer time error, a slip time error and a positive controller effort during a current shift; and

reducing boost time and increasing oncoming friction element starting pressure by the larger of controller effort and slip time adjustment during a subsequent shift.

24. (Currently amended) An adaptive control method for an electronic ratio shift controller for a multiple-ratio transmission, the transmission comprising gear elements defining plural torque flow paths between a torque input shaft and a torque output shaft, and pressure-actuated friction elements selectively establishing a power-on downshift in gear ratio as an oncoming friction element and an offgoing friction element are applied and released, the downshift having an adaptive shift characteristic comprising starting pressure for the offgoing friction element at the beginning of a ratio change, the control method comprising the steps of:

monitoring measured operating conditions during a current power-on downshift; and

adjusting the adaptive shift characteristic for a subsequent shift as determined by the measured operating conditions, whereby power-on downshift quality is improved;

the step of adjusting shift characteristics being executed in a predetermined order of priority to achieve shift smoothness in a reduced power-on downshift time.

25. (Original) The adaptive control method set forth in claim 24 wherein the measured operating conditions include initial slip time.

26. (Original) The adaptive control method set forth in claim 24 wherein the measured operating conditions include extrapolated slip time.

27. (Original) The adaptive control method set forth in claim 24 wherein the measured operating conditions include incipient ramp time.

28. (Original) The adaptive control method set forth in claim 24 wherein the measured operating conditions include initial slip time, extrapolated slip time and incipient ramp time.

29-30. (Cancelled).

31. (Previously presented) The adaptive control method set forth in claim 25 wherein the initial slip time is based on adjustment of a starting pressure for the offgoing friction element.

32. (Previously presented) The adaptive control method set forth in claim 26 wherein the extrapolated slip time is based on adjustment of a starting pressure adjustment for the offgoing friction element.

33. (Previously presented) The adaptive control method set forth in claim 27 wherein the incipient ramp time is based on an adjustment of a starting pressure for the offgoing friction element.

34. (Cancelled).

35. (Previously presented) The adaptive control method set forth in claim 33 wherein incipient ramp time is adjusted as a first priority.

36. (Previously presented) The adaptive control method set forth in claim 32 wherein extrapolated slip time is adjusted as a second priority.

37. (Currently amended) The adaptive control method set forth in claim [[34]] 28 wherein initial slip time is adjusted as a third priority.